SYSTEM AND METHOD FOR SIMULTANEOUS
CONSTRUCTION OF PHYSICAL AND CAD MODELS

ABSTRACT OF THE DISCLOSURE

A system and method for simultaneous construction of a

5   corresponding CAD model and physical model, wherein the CAD

model comprises a plurality of CAD representations each

corresponding to a physical component part that is used to

construct the physical model. During construction of a

physical model using individual component parts, the CAD

10   system can identify a given component part and retrieve its

CAD representation from a CAD library. In addition, the CAD

system allows the user to build a CAD representation of a

given component part if its CAD representation is not stored

in the CAD library. After the CAD representation of the

15   component part is generated, the CAD system will track the

motion (position and orientation) of the part as it is

maneuvered into a desired position in the physical model.

The position and orientation, as well as the CAD

representation of the component part as it exists in the

20   physical model is saved in a CAD model database. During

assembly, the CAD system can render an image of the CAD

model as each component part is placed in the physical

model.